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THESIS

A COMPARISON OF EQUITABLE PER DIEM POLICIES FOR UNITS DEPLOYED TO U.S. BASES

by

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December, 1995

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**A COMPARISON OF
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FOR UNITS DEPLOYED TO U.S. BASES**

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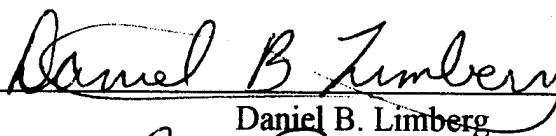
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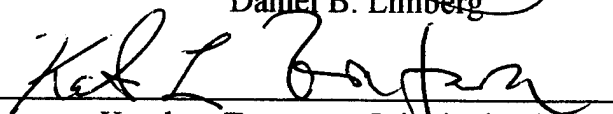
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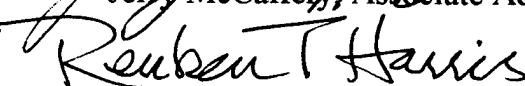
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ABSTRACT

This thesis addresses the per diem funding requirements for units deployed to U.S. bases. Three alternative programs are compared: (1) the current Lodgings Plus policy, (2) AIRPAC's Smart TAD test, and (3) the DoD Task Force to Reengineer Travel recommendation to provide rations in kind. The impacts of these three alternatives on the Type Commanders, travelers, messing facilities, and MWR activities are examined to ensure that the missions can be accomplished while maintaining a high quality of life for the travelers. The primary areas evaluated are galley operations, missed meal reimbursement, and MWR compensation.

Findings include that savings can be achieved by adopting the Rations In Kind policy, while still maintaining a high quality of life for the travelers. With the reduction in the DoN budget, some action is required to bridge the predicted shortfall between available funding and the budget needed to fully support the travel requirements. This study recommends that AIRPAC's Smart TAD test be modified and expanded to ensure that travel funds are available to support future operational commitments and readiness.

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I. INTRODUCTION

Travel funding is a necessity for the military if it is to maintain its readiness and forward presence. As overall defense spending levels have decreased, travel funding levels have been reduced accordingly. However, the operational demands placed upon the military have not decreased accordingly. With regional conflicts erupting from the instability following the Cold War, the necessity for forward deployed units has increased. Senator William Cohen, R-Maine, stated that "we are faced with a choice of reducing our commitment or reducing capability. . . We're over committed and under funded" [Ref. 1]. Type Commanders are faced with difficult choices between mission accomplishment and operational readiness. Mission accomplishment is often given a higher priority than individual training opportunities. Therefore, the deployment of forces to U.S. overseas bases requires an ever increasing share of the decreasing travel budget, and training opportunities are lost.

Forward presence is a requirement for the Navy. With Army and Air Force units returning to the continental United States, the Navy is required to support a larger portion of the forward presence and deterrence roles. However, the Navy's appropriated per diem funding will decrease by over \$40 million (20%) between FY94 and FY97 [Ref. 2]. With declining funds to support the growing number of forward deployed units, the Navy must re-examine its travel policy options to ensure that the mission is accomplished and the quality of life for service members is not compromised. The military must evaluate alternatives to providing these personnel adequate food and lodging.

While the national interest may be affected by a smaller forward presence, operational readiness is affected when travel funds are not available for advanced schooling. Travel funds are used to send military personnel away from their permanent duty station for schooling. For enlisted personnel, this includes advanced training within their rating, enhancing their ability to perform their duties and their potential for advancement. For officers, training will enhance their professional knowledge and enable them to hold billets in more departments during their squadron tours.

A. PURPOSE, LIMITATIONS AND ASSUMPTIONS

The travel funding program must consider both the needs of the travel member and ability of the unit to accomplish its mission. The two requirements must be balanced to achieve an optimal funding program. Furthermore, the funding program must be easily understandable, simple to implement, and compatible with the recommendations of the Department of Defense (DoD) Task Force to Reengineer Travel.

This thesis will examine alternative per diem methods for providing the traveler of deployed units with the meals portion of per diem. While it cannot focus on all of the effects of changing the amount of per diem paid to the traveler, the thesis will address the effects on the Type Commander, government messing facilities, morale, welfare and recreation (MWR) activities, and the individual traveler.

The scope will be limited further to a comparison of the current Lodgings Plus per diem method, AIRPAC's Smart TAD program, and the recommendations of the DoD Task

Force to Reengineer Travel. The intent is to help develop a cost-effective and equitable travel reimbursement program for routine overseas deployments.

The validity of the analysis is limited by the accuracy of the available government messing accounting information. The general cost information is provided by the contractor of the government messing facilities, but is not independently verifiable. A further limitation is the uncertainty concerning the actual number of meals missed because of operational requirements. Best estimates will be made based on interviews with senior squadron personnel at each of the bases.

B. METHOD OF RESEARCH

To help develop a cost efficient and equitable travel reimbursement program, the most promising alternatives must be examined. The best features of each program may then lead to formulation of the optimal program. Information will be gathered from available reports, interviews with personnel currently working on this issue, interviews with the travel members, a questionnaire concerning the travelers' opinions about Smart TAD, and an analysis of financial reports on galley and MWR operations at key installations.

C. THESIS ORGANIZATION

The first chapter outlines the need to examine the travel funding programs. The second chapter will define the needs of the Type Commander and individual traveler. The most promising travel programs (current and future) used by the DoD will be described, including AIRPAC's Smart TAD and the recommendations of the DoD Task Force to

Reengineer Travel. The method of research and important analysis elements will be identified in Chapter III. The analysis of the major programs will then be completed in Chapter IV. The fifth chapter describes a program which will satisfy the travelers' needs, meet the Type Commanders' commitments, preserve the quality of life programs at supporting bases, and be compatible with the travel reengineering objectives. Preliminary implementation recommendations will also be made.

II. BACKGROUND

To enable the Department of Defense (DoD) to provide for the common defense of the United States, military personnel are forward deployed to protect the country's vital interests. The DoD spends \$3.5 billion annually on travel costs in support of this mission. The Navy spent almost \$200 million in per diem during FY94 to fund its forward deployment and training requirements. [Ref. 3]

To manage this travel program, the Joint Federal Travel Regulations (JFTR) specifies the travel-related policies. The individual services then supplement these policies with service-specific policies. This has resulted in a travel system that is complex and often frustrating for the user [Ref. 4]. The myriad of regulations was intended to prevent abuses of the system which might waste public funds. The DoD Task Force to Reengineer Travel has recommended changes to the system to simplify the regulations and give Type Commanders greater flexibility in the allocation of resources. It is under this concept of greater flexibility that changes to improve the travel funding system are considered.

A. OPERATIONAL COMMITMENTS VS. QUALITY OF LIFE

The optimal travel program must ensure that the needs of the Type Commander and individual travelers are satisfied. Ignoring needs of either stakeholder will result in the mission not being accomplished or result in low morale and high turnover. If the mission cannot be accomplished, the ability of the U.S. to promote its national interests abroad will

be adversely affected. However, low morale and high turnover will result in higher personnel costs. Neither alternative is acceptable.

1. Needs of the Type Commanders

Personnel are deployed to overseas bases to accomplish missions related to national security and the promotion of U.S. interests abroad, and these missions must be accomplished in the most cost-effective manner. The American public and Congress expect the military to protect the interests of the United States, while being frugal budgetary managers. This results in Type Commanders being under pressure to accomplish their missions with less travel funding. Between FY94 and FY97, per diem funding for the Navy will decrease by over \$40 million (20%) and funding for the Pacific Fleet will decrease by \$6 million (15%). [Ref. 2]

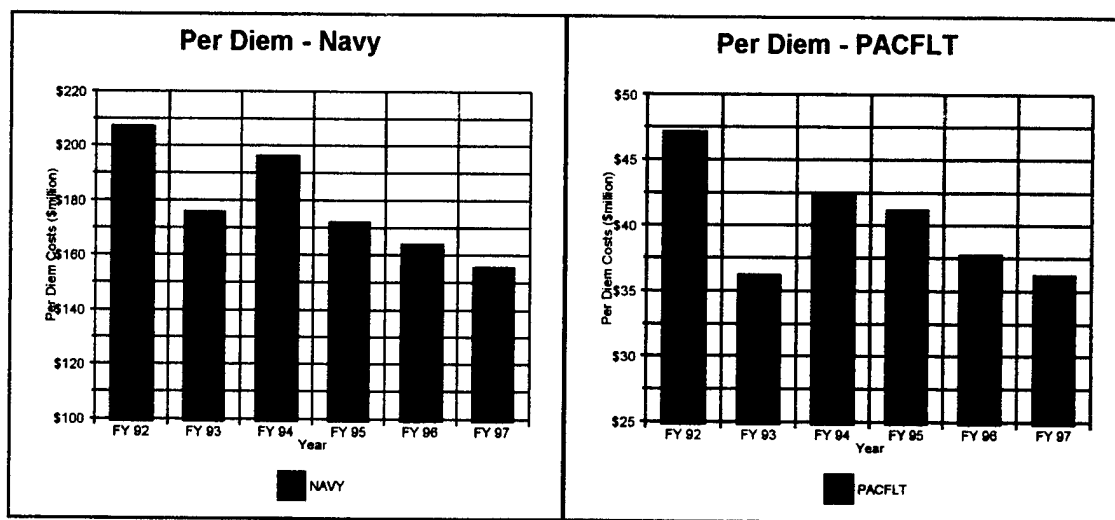


Figure 1. Appropriated Funding Trends for Per Diem
(Actual values are in Appendix A.)

The Type Commander expects to have an adequately trained force in place where and when needed. When there is insufficient funding and/or inadequately trained units, the

interests of the U.S. cannot be adequately promoted. The Type Commanders must have the flexibility to allocate the resources under their control to provide for the deployment of units in the most efficient and economical means possible.

2. Needs of the Individual Travelers

Government travelers are entitled to reasonable food, lodging, and incidental reimbursement during their trips. This reimbursement rate is set at a level where the travelers can travel comfortably while keeping the costs low for the American taxpayer [Ref. 5]. The objective is to be able to carry out their assigned duties without adversely affecting their financial situation.

B. SQUADRON DEPLOYMENTS TO OVERSEAS BASES

Squadron deployments involve the temporary relocation of the entire unit in order to support the aircraft. When the squadrons deploy on aircraft carriers, their travel needs are provided by the ship. However, when they are deployed to another base, the Type Commander must provide adequate funding to provide for their lodging, meals, and incidental expenses. During this time, they will utilize government lodging as much as possible and attempt to utilize government messing facilities.

Each of these bases has resources which may be used by the transient commands to accomplish its mission. If the base resources can be used effectively to support the transient command, the transient command will be able to accomplish its mission at a lower cost. The food service resources are critical to the personnel assigned to these transient commands with the primary concern being the adequacy of the government messing facility to fully support

the transient command. Without being able to meet the transient command's requirements, personnel will be forced to utilize other food service sources. The primary considerations in determining the adequacy of the messing facility are accessibility, availability, rank deference, and dietary/palatability concerns.

Accessibility encompasses the ability of personnel to travel to the galley for meals and return to their work place without interfering with the mission. The hours of operation must be adequate to provide food services to a transient command's personnel before, during, and after normal working hours. Rank deference refers to the availability of separate eating areas for junior enlisted, senior enlisted, and officers. The final consideration, dietary/palatability considerations, acknowledges that the food must be nutritional and considered to be enjoyable. Otherwise, personnel will not maintain their fitness levels, or they will be forced to utilize their own financial resources to find adequate meal sources.

C. PROGRAMS FOR RATION PROVISIONS

The government has a responsibility to house and feed personnel traveling on government business, whether for training, representation, or mission accomplishment. While there are several different programs, the three most promising ones will be discussed.

1. Lodgings Plus Per Diem

As the current method of travel reimbursement, travelers are compensated for their lodging expense (up to a predetermined amount) and receive a flat amount for food and incidentals. The rates are set by the Government Services Administration, State Department, or DoD, depending on the location of the installation and normal costs. Because it is often

infeasible to determine reimbursement levels for individual installations, the expected costs within a geographic area are used.

However, when government messing is available for enlisted personnel, their meals portion of per diem is the full cost (food and operating costs) of eating in the galley. The food cost is called the Basic Meal Rate (BMR), which is currently \$4.65, and covers the actual food cost. The operating cost is called the surcharge, which is currently 300% of the BMR, and covers the overhead costs of the galley. The surcharge is set on an annual basis for all government messing facilities. The BMR and surcharge result in the full cost of eating in the galley being approximately \$19.

2. AIRPAC's Smart TAD Program

Faced with a \$4 million travel funding shortfall in FY92, Naval Air Forces Pacific (AIRPAC) searched for options to meet their mission requirements. The most promising alternative was to revitalize the underutilized government messing facilities (galleys). After receiving a waiver of the surcharge for naval personnel at 5 AIRPAC bases in March 1993, all naval personnel, including officers, were directed to utilize government messing facilities. By avoiding the meal surcharge (300% of the BMR), AIRPAC is able to achieve substantial savings when units are deployed on missions or participate on training detachments. The savings are then available to fund traditional training during an era of decreasing travel budgets.

a. Galley Facilities

Most galleys were designed to serve the enlisted personnel. While many have separate dining areas for chiefs and other senior enlisted personnel, few have appropriate

dining areas for officers. If a facility is to be used by officers, it will need some additional construction.

b. Missed Meals

AIRPAC's position is that requests for missed meals can be submitted by personnel who are unable to eat in government facilities due to operational requirements. However, the approval authority rests with AIRPAC due to some perceived abuses by the Squadron Commanders. Furthermore, most of the few requests are rejected by AIRPAC. While not explicit, the message received by the Squadron Commanders is that missed meal requests are not encouraged. Personnel have been missing meals at their own expense, leading to significant dissatisfaction on the part of the travelers.

3. Travel Reengineering Recommendations

The DoD Task Force to Reengineer Travel was chartered to "develop a fair and equitable temporary duty travel system for all DoD organizations" [Ref. 6]. The task force examined all areas of the travel process, from the travel authorization to payment and accountability. The objective is to streamline and simplify the travel process to ensure that the future missions can be accomplished economically. Reimbursement under these travel categories would be structured on the Lodgings Plus method. In simplifying the travel process, three broad categories of expected travel were identified: deployment, training, and business. [Ref. 4: p. I-5-3]

a. Deployment Travel

Travel consisting of traditional military operations, disaster relief, low intensity conflicts, some field and maneuvering training, and the like would be included in this

category. This category also includes sea duty when the personnel are not permanently assigned to a ship. The lodging and messing services would then be provided in kind, rather than travelers obtaining these services on their own and then seeking reimbursement later. This concept of providing rations in kind for entire units is a major departure from the Lodgings Plus travel policy. Rations in kind would allow travelers to utilize government messing without any cost to the travelers. The galley would then be reimbursed by the Type Commander.

b. Training Travel

Training is further divided into two conditions: when the training objectives require that attendees live and eat together, and when effective training can be achieved without attendees living and eating together. In the former case, government messing and lodging will be required and the reimbursement will be based on the actual costs to the traveler for these services. In the latter case, travelers will be reimbursed according to the following "business travel" process.

c. Business Travel

Travel by individuals and small groups away from their permanent duty station will be included in this category. Government lodging will be directed when appropriate, but government messing will not be required. Reimbursement will follow the Lodgings Plus reimbursement process.

The recommendations call for a paradigm switch which would empower the Type Commander to determine what the most appropriate accommodations would be for units

under their command. The current system, which is full of exceptions and requirements, would be simplified and treat the traveler as a customer. Furthermore, the new process would be more mission oriented and the process would be viewed in a more supporting role.

Two other key concepts pertain to the 'deployment travel' category and how travelers would be reimbursed for missed meals. Travelers who are categorized under 'deployment travel' would receive services in kind, including rations. If they chose to eat at any place other than the government messing facility, they would not be reimbursed for it. Secondly, the accounting for missed meals would be simplified by reimbursing the traveler a flat rate of 50% of the daily per diem rate. Both of these concepts are important changes from the current Lodgings Plus per diem program.

This chapter provided a brief overview of the travel reimbursement system. New policies concerning the per diem system are being explored, and are currently achieving promising results. However, the analysis of these new policies must include the impacts on the individuals, galleys, quality of life activities, bases, and Type Commanders. The following chapter identifies the key areas to be evaluated in completing the analysis.

III. RESEARCH METHODOLOGY

To compare the three major travel funding alternatives, information must be gathered on their costs, benefits, and weaknesses.

A. ANALYSIS OF THE LODGINGS PLUS PER DIEM

The strengths and weaknesses of the current system have been debated by personnel at the unit level as well as within Congress. While everyone seems to dislike portions of the current lodging-plus per diem system, few have been able to develop a better system which will serve the individual traveler and provide for the ability to detect fraudulent claims against the taxpayers [Ref. 4]. As trustees of the taxpayers' money, Type Commanders must be able to accomplish the missions with a minimal amount of funding. In accomplishing this mission, the morale of the travelers is always a concern.

There is much more information about travel problems within the civilian government section. Although both military and civilian government employees must abide by similar travel regulations, the civilian voice has been represented more in the media. Regulations will be the major source of information on how the travel system is supposed to operate.

B. ANALYSIS OF AIRPAC'S SMART TAD PROGRAM

AIRPAC has implemented a travel cost reduction program in March 1993. Although it is still in the experimental phase, it is yielding substantial savings for the Type Commander.

AIRPAC has collected information on the traveler's acceptance of such a program and on the food service costs of operating under such a system.

Each year, AIRPAC has submitted a proposal to extend the experiment. Currently, it affects 5 bases in the Western Hemisphere (Diego Garcia, Barbers Point, Whidbey Island, North Island, and Fallon) and AIRLANT has just received approval to experiment with 5 bases under its command. The proposals depict a distinct need for such measures and illustrate the acceptance by travel personnel.

AIRPAC has conducted annual surveys of the program participants and has broken down all of the responses into positive and negative comments. Although the responses are not broken down by particular bases, some of the negative responses do indicate what base the comments are referring to.

Interviews with both implementers and users of the Smart TAD program are critical in gaining a better understanding of the benefits and problems plaguing this innovative method of providing food services to personnel deployed to U.S. bases. Personal interviews are also important to better understand how the program is currently operating and what the basis for some of the complaints are.

C. ANALYSIS OF THE TRAVEL REENGINEERING RECOMMENDATIONS

The DoD Task Force to Reengineer Travel was established because of the high cost of processing travel requests and the high frustration level on the part of the traveler. The report submitted by the DoD Task Force to Reengineer Travel addressed several classes of

travelers. For this thesis, the traveler in a deployed status is the only class of traveler considered. Implementation plans will also be reviewed.

D. FINANCIAL IMPLICATIONS OF AIRPAC'S SMART TAD PROGRAM

Because the recommendations of the DoD Task Force to Reengineer Travel have not been fully implemented, the only financial information on the implications of reducing the per diem levels is available from sites under AIRPAC's Smart TAD program. Naval Support Facility (NAVSUPFAC) Diego Garcia and Naval Air Station (NAS) Fallon were chosen as appropriate sites for analyzing the effects of the Smart TAD program on galley operations and on morale, welfare and recreation revenue generating activities.

1. Effects on the Type Commanders

While the Type Commanders may be concerned with their personnel's quality of life, their main objective is to accomplish the mission. Per diem issues arise when decisions are made about sending personnel away from their permanent duty station for training and when units are deployed to overseas U.S. bases. While units are also detached to CONUS bases for relatively short periods of time, the analysis will model the deployment of a P-3 squadron to Misawa Air Force Base (AFB), Japan.

AIRPAC's food portion of the per diem rates over the last three years will be analyzed to determine what the expected savings for the Type Commander could be. The food portion is analyzed because the incidental and lodging portions of the per diem rate are fixed.

2. Effects on the Deployed Personnel

Deployed personnel experience unique hardships. One such concern is the financial situation of their family. Per diem is designed to adequately compensate travelers for their appropriate expenses. To the extent that per diem covers their food, lodging, and incidental costs, travelers are no worse off financially than remaining at their permanent duty station. The appropriate measure for travelers is their ability to receive three nutritious meals within their per diem budget.

3. Effects on Galley Operations

If transient personnel are directed to utilize government messing, the galley must be able to adequately support the mission requirements of the transient command. For transient commands in a 24 hour status, that may necessitate longer meal hours and possible additional meals (ie. midrats). This change in operations may require additional support personnel and result in higher utility expenses. Even if no change in operations is required, there will be a change in the direct food costs. In situations where the traveler pays the food portion of the per diem rate, the difference between the variable cost of that meal and the BMR paid is a relevant cost.

4. Effects on Morale, Welfare and Recreation Activities

MWR activities directly affect the quality of life for personnel assigned to an installation. While most of the mission essential activities (fitness center, swimming pool, and library) are supported with appropriated funds, other revenue generating activities (bowling alley, club system, and golf course) depend upon the installation personnel spending their disposable income. In particular, the club system revenue would be adversely affected by an

increase in galley utilization. MWR still has fixed costs to cover, and will do so by increasing costs for some activities and appropriate reductions in other services. This combination results in a decrease in the quality of life for all personnel on the base.

The key areas of evaluation have been identified. The challenge is how to predict the financial requirements and compare the effects on the stakeholders for each travel policy. In the following chapter, a model will be presented to evaluate the total cost of each policy for the Type Commander. Furthermore, two bases under AIRPAC's Smart TAD program will be analyzed to predict the effects on a third base, currently under the Lodgings Plus policy.

IV. TRAVEL FUNDING ANALYSIS

To adequately assess the potential impact on Misawa AFB, Japan, the effects of AIRPAC's Smart TAD program on NAS Fallon, Nevada and NAVSUPFAC Diego Garcia must be understood. By evaluating the dining choices made by personnel faced with a reduction in their per diem reimbursement, the results can be predicted for another similar base considering such a program. Any change in per diem levels will have some effect on galley operations, MWR activities, base operating expenses, missed meal reimbursement, and other unrecorded costs. These costs must be contrasted against the per diem savings. Any difference between the costs and savings must be examined.

The behavioral pattern of the travelers must be modeled for planners to correctly predict the effects of proposed changes in the per diem program. After the model is completed, the probable values for the model attributes must be determined and the direct effects can be calculated. The direct effect includes per diem, galley, and missed meal payments. After the direct effects of a per diem change are determined, the indirect effects on the MWR activities and base operations must be determined. The net effect of a per diem change will be a valuable input in the decision making process.

A. PER DIEM FUNDING FORECASTING (PDFF) MODEL

The PDFF model will assist the planner in determining the number of personnel expected to eat in the galley, miss meals, and eat elsewhere. The reimbursement paid to the galley and individual are the important expenses. The model evaluates three alternatives:

Lodgings Plus per diem, AIRPAC's Smart TAD with accurate missed meal payments, and Rations In Kind with accurate missed meal payments. The model is described in Figures 2 - 7, and supporting calculations are found in Appendix B.

\$P	Per Diem Rate
\$R	Cost Per Ration - Determined by the galley variable costs
BMR	Basic Meal Rate
Sch	Surcharge - Set annually for all government messing facilities
N	# of Transient Personnel
M	Probability of being entitled to a missed meal reimbursement
G	%, Preference to eat in the galley at the current per diem rate
C	%, Preference to not eat in the galley
MPE	%, Marginal Propensity to Eat in the Galley (with a per diem change)

Figure 2. Model Attributes

<u>Program</u>	<u>Per Diem</u>	<u>Galley Use %</u>	<u>Ng</u>	<u>Nm</u>	<u>Nc</u>	
Lodgings Plus						
Smart TAD						
Rations In Kind						
<u>Program</u>	<u>Total Per Diem Reimb.</u>	<u>Missed Meal Reimb.</u>	<u>Recon. Payment to Galley</u>	<u>Total AIRPAC Payment</u>	<u>Total Traveler Reimb.</u>	<u>Direct Galley Revenue</u>
Lodgings Plus						
Smart TAD						
Rations In Kind						

Figure 3. Model Output

Ng	# of Rations Provided by the Galley
Nm	# of Personnel Entitled to Missed Meal Reimbursement
Nc	# of Rations Not Provided by the Galley (excludes meals included in Nm)
Total Per Diem Reimbursement	
	Includes the food portion of the per diem payment provided to the traveler
Missed Meal Reimbursement	
	Includes the payments to the travelers for claimed missed meals
Reconciliation Payment to Galley	
	Includes payments to the galley for the net increase in food stores and labor
Total AIRPAC Payments	
	Includes all payments associated with messing made by AIRPAC
Total Traveler Reimbursement	
	Includes all payments made to the traveler.
Direct Galley Revenue	
	Includes the BMR and surcharge collected by the galley

Figure 4. Total Value Descriptions

Nm	=	N * M
Ng	=	G * (N - 0.5Nm)
Nc	=	(1 - G)(N - 0.5Nm)
Total Per Diem	=	N * \$P
Lodgings Plus \$P	=	Locality Rate
Smart TAD \$P	=	Basic Meal Rate
Rations In Kind		<i>(no per diem is paid)</i>
Missed Meal Reimb	=	N * M * 0.5\$P _{locality rate}
Recon Payment	=	(Ng * \$R) - Direct Galley Revenue
AIRPAC Payment	=	Total Per Diem + Missed Meal Reimb + Recon. Payment
Traveler Reimb	=	Total Per Diem + Missed Meal Reimbursement
Direct Galley Rev	=	Ng (BMR + Sch)

Figure 5. Formulas

Nm	There is an 'M' probability that a traveler would miss 1-2 meals in any given day due to operational requirements. The remaining meals would be eaten as usual.
Ng	If the traveler has a choice, there is 'G' probability that the traveler would choose to eat in the galley.
Nc	If the traveler has a choice, and does not eat in the galley, that meal would be counted towards the total number of rations eaten elsewhere.
$Ng + Nc \neq N$	Ng and Nc only equal the number of rations which the traveler was making a dining choice. The number of meals missed by travelers in the Nm category are removed from consideration.
0.5Nm	On average, when travelers are entitled to file missed meal claims, they will have missed one half of their entitled meals (some days, they will miss one meal, and other days, they will miss two meals). The remaining meals will be eaten as usual, with a 'G' probability of deciding to eat in the galley.
MPE	Choices are made by comparisons. When Smart TAD began, the number of travelers eating in the galley increased. If per diem were eliminated completely and meals were provided in the galley for free, it is expected that travelers on the margin would decide to eat in the galley.

Figure 6. Descriptions

Lodgings Plus

Few travelers decide to utilize government messing facilities. This is also the most expensive travel funding program examined. Changes in missed meals, galley preferences, or ration costs do not affect the funding requirements.

Smart TAD

Galley utilization increased when the per diem was significantly reduced and the price of a meal in the galley was correspondingly reduced. Eventually, AIRPAC will need to address the missed meal problem, so missed meal reimbursement was included. AIRPAC currently considers the changes in galley operating costs in their evaluation of their Smart TAD test.

Increases in missed meals and ration costs increase the funding requirements. Changes in galley preferences alone do not significantly affect the funding requirements.

Rations In Kind

Increases in galley preferences, missed meals, and ration costs increase the funding requirements. However, the total AIRPAC payment is usually less than the Smart TAD funding requirement.

Figure 7. Model Observations

B. DIRECT PER DIEM EFFECTS

The direct effects of a per diem change include the new per diem payments, change in galley expenses, and missed meal reimbursements. Each of these effects must be considered to adequately evaluate the effects of a change on the Type Commander, galley, and traveler. The Type Commander is responsible covering the direct expenses. The galley will incur changing costs as the number of rations served changes. And, the traveler is entitled to reasonable reimbursement for expenses, including expenses arising from missed meals.

1. Per Diem Payments

The military provides its members with rations in the form of cash payments or actual meals. This concept does not change when the military member is in a travel or deployed status. When naval personnel are on a ship, they are provided their meals: enlisted personnel receive rations in kind and officers pay for their rations from their subsistence pay. The food portion of per diem is intended to enable the travelers to eat nutritious meals at reasonable establishments without using their own financial resources. When naval personnel are on land, they are either provided rations in kind, subsistence, or per diem. The per diem is intended for travelers to be able to eat nutritious meals at reasonable establishments without incurring a personal financial loss.

The concept of providing meals to military personnel assigned to a unit in a deployed or detached status is similar to naval personnel being assigned to a ship. If the service members were provided "in kind" meals for all of their meals, they would be provided nutritious meals without any financial hardship.

Under the Lodgings Plus per diem program, the traveler receives the full locality per diem rate. If government messing is available, the locality rate equals the BMR and surcharge rate. Under AIRPAC's Smart TAD program, the traveler receives the BMR rate only. Under the Rations In Kind program, the traveler would not receive any per diem. The amount of direct per diem for travelers at each of the sites for FY94 is listed in Table 1 and Appendix C.

FY94 Direct Per Diem Costs				
Per Diem Policy	NAS Fallon Officers	NAS Fallon Enlisted	NAVSUPPFAC Diego Garcia	Misawa AFB
Lodgings Plus	\$1,514,880	\$3,260,736	\$2,096,232	\$2,352,960
Smart TAD	\$293,508	\$819,590	\$513,025	\$575,856
Rations In Kind	\$0	\$0	\$0	\$0

Table 1. Direct Per Diem Funding (FY94) Under Each Per Diem Policy

2. Galley Operations

There are five cost categories associated with galley operations: labor, stores consumed, supplies, utilities, and depreciation/upkeep. Of these costs, some of the costs will vary with the expected ration production. Labor is a variable cost with discrete changes due to hiring when the rations production exceeds current capabilities. Stores consumed is the primary direct variable cost, with supplies and utilities varying slightly with the number of rations provided. The depreciation/upkeep costs will not be significantly affected by a change in ration production. It is only appropriate to consider the costs which experience relevant changes due to changes in ration production. Galley operating expenses are in Appendix D.

a. NAS Fallon

Galley operations are sub-contracted under a Base Operating Support (BOS) contract. The contract is a fixed price contract with allowances for an increase in the number of rations served. The fixed price for up to 4200 rations (3 meals) per month is \$396,144 with a ration fixed price of \$7.86 for each ration over 4200. Between FY92-FY94, the galley experienced a constantly increasing utilization rate.

Because of the significant increase in galley utilization, the seating capacity was examined as a possible constraint. Based on other galleys' capacities and a seating capacity of 300, there is seating for at least 200,000 rations annually.

Labor costs in 1994 dollars remained constant from FY92 until FY93. Then labor costs jumped \$216,000 during FY94 as the number of rations increased by 11,000 to 103,005 annually. The civilians employed for \$38,000 to assist the contractor in 1993 are also a relevant cost. Stores consumed, the remaining significant cost is the only variable cost and increased at a constant rate of \$5 per ration from FY92-FY94.

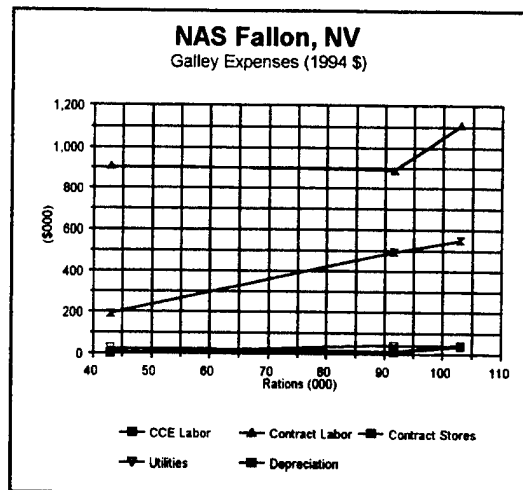


Figure 8. NAS Fallon Galley Expenses in Real Dollars (FY94)

b. NAVSUPPFAC Diego Garcia

The galley is currently operated jointly by military and BOS contract personnel, and the utilization rate is stable, ranging between 220,000-240,000 rations annually. FY94 had the fewest number of rations served, followed by FY92.

The labor cost was unaffected by the implementation of Smart TAD, partly because there was not the predicted increase in galley patronage. However, the stores consumed cost has been increasing at a real cost of \$3 per ration.

The stable utilization rate is in contrast to the results at NAS Fallon. While the number of rations increased significantly at NAS Fallon, there are several reasons why the same did not occur at NAVSUPPFAC Diego Garcia. The primary reason for the stability is that Diego Garcia is an isolated base, an island, with limited eating alternatives. Furthermore, the alternatives were not significantly more expensive than the galley. Disposable income available for dining purposes is also greater at Diego Garcia because there are fewer living expenses for the individuals.

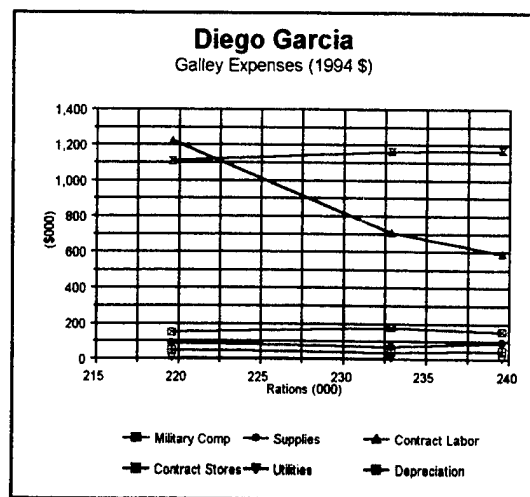


Figure 9. NAVSUPPFAC Diego Garcia Galley Expenses in Real Dollars (FY94)

c. Misawa AFB

The government dining facility at Misawa AFB is government run. While detailed information about Misawa AFB Dining Facility's operating expenses was not available, the Food Service Officer was able to provide approximate information concerning the variable food and labor costs. The only true variable cost is for food, which would be \$3.50 per ration. Additionally, an increase of 151-200 rations each day would require additional personnel. The five military personnel, at the E-4 level, would increase the Military Compensation Expense by \$146,490. The Food Service Officer said that utilities and supplies would not be affected.

3. Missed Meals

One of the primary concerns for transient personnel is how not to lose money on detachments and deployments. Of the personnel surveyed by AIRPAC concerning the Smart TAD program, two of the most common complaints pertained to the lost opportunity to choose where they can eat, and the financial burden associated with missing meals. The DoD Task Force to Reengineer Travel report provides for a simple solution to the latter complaint. By providing the travelers with 50% of the local per diem rate if the mission requirements prevent them from eating all of their meals in the government messing facility, the travelers are able to select a suitable alternative for the 1 or 2 missed meals [Ref. 4]. The next major hurdle is to be able to forecast what the missed meal expense would have been at AIRPAC's Smart TAD sites and what could be expected at Misawa AFB.

Information is available on the number of transient personnel at the BOQ and BEQ, and the units deployed to NAS Fallon and NAVSUPPFAC Diego Garcia were able to provide some information on the probability of missing meals due to operational requirements. AIRPAC knows how many missed meal requests are submitted for reimbursement, however, a survey of senior squadron personnel in detached/deployed squadrons indicated that they were either not aware that there was a method of reimbursement for missed meals or they indicated that they were not supposed to submit the requests.

a. NAS Fallon

During a recent detachment, an air wing was asked to estimate the number of meals its personnel were not able to eat at the galley due to operational requirements. While very few missed meal requests are submitted to AIRPAC for reimbursement, the nature of flight operations would indicate that personnel are not able to eat all of their meals at the government messing facilities.

The results of this quick survey were that over 39,000 actual meals were missed by almost 2000 personnel during the 21 day detachment. The primary reason for the missed meals was that flight operations began at 0800 and personnel were not able to eat and arrive at their work center by 0800. Lunch was also frequently missed by flight personnel because they landed at 1230 and immediately went into their debrief. Although most personnel had the opportunity to eat dinner in the galley, some personnel opted to exercise before eating dinner, thereby causing them to be done after the galley's dinner hours.

The figure of 39,000 missed meals indicated two things: if left to the squadrons for missed meal approval, with no strong guidance, there would be substantial

abuse of the reimbursement program as the senior personnel tried to "take care of" their personnel; and there is a missed meal problem for transient personnel. The best way to address the problem of missed meals is to examine the reasons for missing meals. Personnel have 2.5 hours to eat breakfast in the galley before the 0800 workday begins. While there may be a waiting line at 0730, personnel should plan ahead. The 10 minute walk to the hangar is close enough for personnel to walk to and from the workplace for their meals. Missing lunch is a reality for a few maintainers and other critical personnel if there are flight operations during the lunch period. The conservative number of personnel missing a meal due to operational requirements is 20%. While efforts could be made to find ways to reduce this figure, it is a good baseline. The aviator dilemma is more complex. Their day starts before 0800 and extends to almost 1630 including pre-flight planning, flights, debriefs, and mission planning for the next day. Aviators will usually miss at least one meal during a flying day due to their operational requirements. Using the more accurate estimations that 20% of the enlisted personnel and 75% of the officers would be entitled to claim for missed meals each day, the predicted number of missed meals for that same 2000 member detachment would be under 12,000, not over 39,000.

b. NAVSUPPFAC Diego Garcia

The Operations Officer of a recently deployed squadron did not see any purpose in determining the number of missed meals because, as he stated, everyone has an opportunity to go to the galley and that operational requirements did not interfere with meal times. Furthermore, he said that the flight schedule did not force aviators to miss a hot meal

in the galley. One reason for this phenomenal success could be that Diego Garcia is a logistical hub with very few inflexible operational requirements.

However, a rough polling of squadron personnel indicated a far different situation. Personnel stated that they were told that they could not submit missed meal requests and that the restriction had since been reduced to just the officers. Regardless of the regulations, they were asked if they had ever been prevented from eating in the galley due to operational requirements. A few maintainers and supervisors mentioned that they were occasionally unable to go to the galley due to the necessity for them to be at the hangar to supervise the quality of critical maintenance activities. Some aviators also stated that they often purchased their own meals from the coffee mess or base store before flights because they disliked the box lunches or did not have enough notice to order a box lunch. A liberal approximation of the number of missed meals is 20%, or 22,000 missed meals annually.

c. Misawa AFB

The deployed P-3 squadron does not have the flexibility to schedule missions around the government dining facility hours. Furthermore, the duration of the flights could require that more than one meal is missed during a single flight. Fortunately, around-the-clock operations is not the norm, and the dining facility is within 5 minutes of the hangar and berthing. For these reasons, a rough approximation of 20% of the personnel missing 1-2 meals is appropriate, or around 25,000 meals annually.

4. PDFF Model Utilization

The following tables will illustrate the effects of variation in galley preference, ration costs, and missed meal rates. Tables 2 - 4 illustrate the funding requirements when each of

the above attributes vary individually, while Tables 5 - 7 illustrate the funding requirements for the expected and worst case scenarios for each base. All of the tables compare the predicted costs of each of the policies, savings over the current Lodgings Plus policy and the projected savings of the Rations In Kind policy over the AIRPAC Smart TAD policy. It is important to realize that only one attribute is being changed in the first three tables, with the other two main attributes remaining fixed at the most likely value.

a. Galley Preference Effect on Alternative Policies

Galley Preference						
	Cost of Per Diem Policy Options			Savings over Lodgings Plus		Savings over Smart TAD
	Lodgings Plus	Smart TAD	Rations In Kind	Smart TAD	Rations In Kind	Rations In Kind
<i>Missed Meal %: 0.75</i>	NAS Fallon: Officers					
Galley Pref: 40%	1,514,880	751,523	659,801	763,358	855,079	91,721
Galley Pref: 50%	1,514,880	751,523	678,146	763,358	836,735	73,377
Galley Pref: 60%	1,514,880	751,523	696,490	763,358	818,390	55,033
<i>Missed Meal %: 0.20</i>	NAS Fallon: Enlisted					
Galley Pref: 40%	3,260,736	1,279,705	910,889	1,981,031	2,349,847	409,795
Galley Pref: 50%	3,260,736	1,279,705	984,652	1,984,031	2,276,084	344,228
Galley Pref: 60%	3,260,736	1,279,705	1,058,416	1,981,031	2,202,320	278,661
<i>Missed Meal %: 0.20</i>	NAVSUPFAC Diego Garcia					
Galley Pref: 40%	2,096,232	671,346	440,485	1,424,886	1,655,747	230,861
Galley Pref: 50%	2,096,232	671,346	486,657	1,424,886	1,609,575	184,689
Galley Pref: 60%	2,096,232	671,346	532,829	1,424,886	1,563,403	138,517
<i>Missed Meal %: 0.20</i>	Misawa AFB					
Galley Pref: 40%	2,352,960	870,758	640,921	1,482,202	1,712,039	229,837
Galley Pref: 50%	2,352,960	900,056	692,748	1,452,904	1,660,212	207,308
Galley Pref: 60%	2,352,960	900,056	744,575	1,452,904	1,608,385	155,481

Table 2. Per Diem Funding Requirements with Varying Galley Preferences. The missed meal probability remains constant at the expected level and the ration cost is held constant at the Basic Meal Rate (BMR).

The galley preference has no effect on the Lodgings Plus program and only a minimal effect on AIRPAC's Smart TAD program. AIRPAC would only be responsible for the increased semi-fixed labor costs. Any preference increase under the Rations In Kind program would result in additional costs because the Type Commander pays for each additional ration provided by the galley. Under the Smart TAD program, the traveler pays the galley for the ration.

b. Galley Cost Effect on Alternative Policies

Ration Cost						
	Cost of Per Diem Policy Options			Savings over Lodgings Plus		Savings over Smart TAD
	Lodgings Plus	Smart TAD	Rations In Kind	Smart TAD	Rations In Kind	Rations In Kind
<i>Missed Meal %: 0.75</i>	NAS Fallon: Officers					
Ration Cost: \$ 5	1,514,880	758,426	686,430	756,454	828,450	71,996
Ration Cost: \$ 8	1,514,880	817,601	757,440	697,279	757,440	60,161
Ration Cost: \$ 11	1,514,880	876,776	828,450	638,104	686,430	48,326
<i>Missed Meal %: 0.20</i>	NAS Fallon: Enlisted					
Ration Cost: \$ 5	3,260,736	1,307,465	1,017,965	1,953,271	2,242,771	289,500
Ration Cost: \$ 8	3,260,736	1,545,411	1,303,500	1,715,325	1,957,236	241,911
Ration Cost: \$ 11	3,260,736	1,783,356	1,589,034	1,477,380	1,671,702	194,322
<i>Missed Meal %: 0.20</i>	NAVSUPFAC Diego Garcia					
Ration Cost: \$ 4	2,096,232	639,075	447,932	1,457,157	1,648,300	191,143
Ration Cost: \$ 6	2,096,232	738,370	567,086	1,357,862	1,529,146	171,284
Ration Cost: \$ 8	2,096,232	837,665	686,240	1,258,567	1,409,992	151,425
<i>Missed Meal %: 0.20</i>	Misawa AFB					
Ration Cost: \$ 3	2,352,960	808,105	582,407	1,544,855	1,770,553	225,698
Ration Cost: \$ 5	2,352,960	919,561	716,154	1,433,399	1,636,806	203,407
Ration Cost: \$ 7	2,352,960	1,031,017	849,901	1,321,943	1,503,059	181,116

Table 3. Per Diem Funding Requirements with Varying Ration Costs. The missed meal probability and galley preference values are held constant at the expected levels. The ration cost varies between the low and high estimate.

Again, varying galley costs have no effect on the Lodgings Plus per diem program. The ration cost is reported by the galley and the sensitivity analysis compares the low, expected, and high estimates. Changes in ration costs will have an effect on the total galley reimbursement in the same direction for the Smart TAD and Rations In Kind programs. The varying costs will have a greater effect on the Rations In Kind program because of the increased propensity to eat in the galley.

c. Missed Meal Effect on Alternative Policies

The missed meal rate has no effect on the Lodgings Plus per diem program. The Smart TAD and Rations In Kind programs incur additional costs as the missed meal rate increases. The officers and enlisted personnel at NAS Fallon were computed individually in the following table because the officers are expected to have a significantly higher missed meal rate due to the flight operations.

An increase in the missed meal rate will have a lesser affect on the Smart TAD policy because AIRPAC has already paid the travelers the BMR. If the travelers are eligible for a missed meal claim, 50% of the BMR would be deducted from the missed meal payment. In this case, AIRPAC's net cost of that missed meal claim under Smart TAD would be less than the net cost under the Rations In Kind program. Missed meal data can be found in Appendix E.

Missed Meals						
	Cost of Per Diem Policy Options			Savings over Lodgings Plus		Savings over Smart TAD
	Lodgings Plus	Smart TAD	Rations In Kind	Smart TAD	Rations In Kind	Rations In Kind
NAS Fallon: Officers						
Missed Meal %: 0.2	1,514,880	415,645	309,982	1,099,235	1,204,898	105,663
Missed Meal %: 0.5	1,514,880	598,851	510,799	916,029	1,004,081	88,052
Missed Meal %: 0.75	1,514,880	751,523	678,146	763,358	836,735	73,377
Missed Meal %: 1.0	1,514,880	904,194	845,492	610,686	669,388	58,702
NAS Fallon: Enlisted						
Missed Meal %: 0.1	3,260,736	1,157,648	846,203	2,103,088	2,414,533	311,444
Missed Meal %: 0.2	3,260,736	1,279,705	984,652	1,981,031	2,276,084	295,053
Missed Meal %: 0.3	3,260,736	1,401,762	1,123,102	1,858,974	2,137,634	278,661
Missed Meal %: 0.4	3,260,736	1,523,820	1,261,551	1,736,916	1,999,185	262,269
NAVSUPFAC Diego Garcia						
Missed Meal %: 0.1	2,096,232	592,186	397,236	1,504,046	1,698,996	194,950
Missed Meal %: 0.2	2,096,232	671,346	486,657	1,424,886	1,609,575	184,689
Missed Meal %: 0.3	2,096,232	750,506	576,078	1,345,726	1,520,154	174,429
Missed Meal %: 0.4	2,096,232	829,667	665,498	1,266,565	1,430,734	164,168
Misawa AFB						
Missed Meal %: 0.1	2,352,960	811,201	592,376	1,541,759	1,760,584	218,825
Missed Meal %: 0.2	2,352,960	870,758	692,748	1,482,202	1,660,212	207,308
Missed Meal %: 0.3	2,352,960	959,614	793,121	1,393,346	1,559,839	166,493
Missed Meal %: 0.4	2,352,960	1,048,469	893,493	1,304,491	1,459,467	154,976

Table 4. Per Diem Funding Requirements with Varying Missed Meal Rates. The Galley Preference is held constant at 50% and the Ration Cost is held constant at the BMR.

5. "What If" Simulations

The PDFF model is very useful in conducting "what if" simulations. The previous tables have illustrated the expected costs and savings associated with a wide range of possibilities. However, only one attribute was measured, with the other two attributes reflecting the probable values. By being able to vary all three attributes, cost analysts are able

to determine the expected performance for the Smart TAD and Rations In Kind programs. One such simulation could be determining the minimum expected performance under the worst case scenario.

For example, the Type Commander could know what the minimum expected savings would be if the travelers at Misawa AFB were included under the Smart TAD program. By combining the worst case for each attribute ($G = 0.6$, $\$R = \$ 7$, and $M = 0.4$), the cost analyst could estimate that \$1.1 million could be saved annually. The Type Commander would also know that an additional \$115,000 could be saved if those travelers were included under the Rations In Kind program instead. Table 5 lists the best, expected, and worst cases for each attribute. Tables 6 and 7 illustrate the expected and worst case scenarios, and their associated costs and savings.

Summary of the Attributes				
	Situation	Galley Preference	Cost Per Ration	Missed Meals
NAS Fallon: Officers	Best	0.4	\$ 5	0.2
	Expected	0.5	\$ 8	0.75
	Worst	0.6	\$ 11	1.0
NAS Fallon: Enlisted	Best	0.4	\$ 5	0.1
	Expected	0.5	\$ 8	0.2
	Worst	0.6	\$ 11	0.4
NAVSUPPFAC Diego Garcia	Best	0.4	\$ 4	0.1
	Expected	0.5	\$ 6	0.2
	Worst	0.6	\$ 8	0.4
Misawa AFB	Best	0.4	\$ 3	0.1
	Expected	0.5	\$ 5	0.2
	Worst	0.6	\$ 7	0.4

Table 5. Summary of the Attributes

Expected Case Scenario						
	Cost of Per Diem Policy Options			Savings over Lodgings Plus		Savings over Smart TAD
	Lodgings Plus	Smart TAD	Rations In Kind	Smart TAD	Rations In Kind	Rations In Kind
NAS Fallon: Officers	1,514,880	751,523	678,146	763,358	836,735	73,377
NAS Fallon: Enlisted	3,260,736	1,279,705	984,652	1,981,031	2,276,084	295,053
Diego Garcia	2,096,232	671,346	486,657	1,424,886	1,609,575	184,689
Misawa AFB	2,352,960	900,056	692,748	1,452,904	1,660,212	207,308

Table 6. Per Diem Funding Requirements Under the Expected Scenarios

Worst Case Scenario						
	Cost of Per Diem Policy Options			Savings over Lodgings Plus		Savings over Smart TAD
	Lodgings Plus	Smart TAD	Rations In Kind	Smart TAD	Rations In Kind	Rations In Kind
NAS Fallon: Officers	1,514,880	1,024,438	1,000,452	490,442	514,428	23,986
NAS Fallon: Enlisted	3,260,736	2,061,048	1,953,884	1,199,688	1,306,852	107,164
Diego Garcia	2,096,232	1,007,074	913,516	1,089,158	1,182,716	93,558
Misawa AFB	2,352,960	1,217,458	1,102,535	1,135,502	1,250,425	114,924

Table 7. Per Diem Funding Requirements Under the Worst Case Scenarios

C. INDIRECT PER DIEM EFFECTS

The fiscal effects involved with per diem checks, galley operations, and to a lesser extent, missed meals, are all easily visible. However, changes in the per diem program affects other aspects of the base too. The change in disposable income, price of economic substitutes, and policies will alter the behavior of military personnel. The MWR Department relies on the disposable income of, and is in direct competition with the galley for, customers. The base might also incur additional expenses due to policy changes. Without addressing

these issues, the services provided to the transient personnel could be adversely affected, decreasing the quality of life for all base personnel.

1. Morale, Welfare, and Recreation Activities

MWR activities are essential to the quality of life on each installation. They include eating establishments, fitness centers, recreational activities, and family services. While appropriated funds support several of the service activities, their programs often have to be augmented by the profits from the revenue generating activities. These activities include eating establishments and some recreational activities (bowling and golf). The effect of a per diem change will depend on the proportion of transient personnel to permanent base personnel and the size of the monetary change. Compared to the monthly disposable income on that base, a small per diem change might not be noticeable to the revenue generating activities. MWR operating summaries for the three bases are in Appendix F.

a. NAS Fallon

NAS Fallon (Fallon) is utilized by VFA-125 (Replacement Air Group) for advanced instruction and by carrier air wings for pre-deployment workups. Fallon is located in northern Nevada, near the several operational ranges. While VFA-125 has a permanent detachment, the carrier air wings have the biggest impact with over 2000 personnel detached there for over three weeks each time.

Before Smart TAD, personnel had the choice of eating at any of the three clubs, the galley, flight-line galley, or buying food supplies at the commissary. While officers were not permitted to eat at the galley, the Officers' Club (Silver State Club) provided three nutritious meals each day. Today, the same meal sources are available, with the exception of

the Silver State Club. The Silver State Club is currently only able to provide food service during the weekday lunch hours. The bar is still open in the evenings, but does not offer food service.

MWR activities are essential to the morale of personnel at NAS Fallon, Nevada. Being an isolated site, on-base recreational activities are the main source of entertainment for most transient personnel. The revenue generated by the club system is used to sponsor activities which enhance the quality of life for all base personnel. The main clubs are the Enlisted Sports Line Bar & Grill, Silver State O'Club, and Chief's Club. While the Sports Bar is operating at a profit, the Silver State O'Club and Chief's Club are both operating at a loss.

The Silver State Club is currently operating at a loss, being barely able to support weekday lunches and a nighttime bar. As more officers began utilizing government messing, its patronage has dropped by over 85%. The management is forced to operate during a time of uncertainty, unable to predict the number of lunches going to be served and not able to maintain a sufficiently trained staff to accommodate special requests. The 13 full-time employees have been cut to 5 part-time employees.

The reduction in patronage and profitability can be compared on the following graphs. The increase in officer rations in the galley matches the decrease in O'Club revenue.

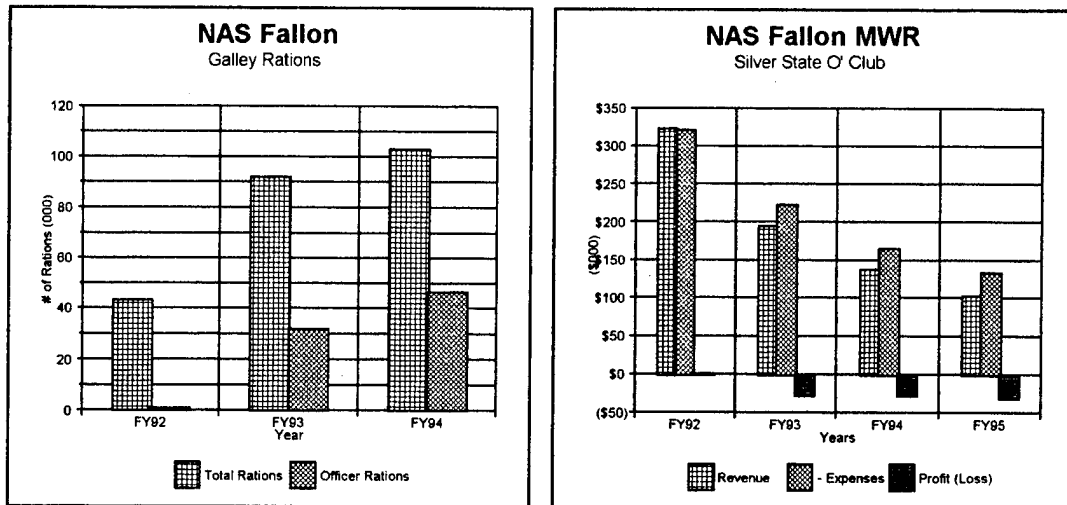


Figure 10. Galley Rations and O'Club Operations Comparison

The Chief's Club is not profitable and is only open for bar operations. The MWR Director will not close the club because it would be a further erosion of the services provided to the chiefs. While they are currently exploring options for improving the financial outlook for the club, the reduced per diem paid to the chiefs eliminates the option of providing any form of food service.

The Sports Line Bar & Grill is the only surviving club. A few years ago, MWR began to explore ideas for providing more services to the enlisted members, encouraging them to remain on base for their recreation. The sports bar concept has been a significant success. By renovating the old Enlisted Club, adding televisions and other recreational activities, they have been able to provide the enlisted members a viable alternative to going off base for their relaxation. Furthermore, a recreational coordinator was hired to plan special events.

The reduction to per diem rates has adversely affected the MWR operations. While the Sports Line Bar & Grill was able to recover from the change by providing better services which attracted more customers, the Silver State Club was not able to make the transition. The resulting reduction in services is unacceptable if the quality of life for officers and chiefs is to be maintained. A subsidy should be paid to the clubs to ensure that the clubs are open for the basic services and nightly camaraderie. \$90,000 each year would enable the club manager to maintain a staff which would be available for daily operations and special events. While the \$90,000 will not solve the problem of decreased patronage, it will enable the clubs to offer the same services which were available before Smart TAD began. The remaining shortfall would be made up in increased revenue due to the restoration of services.

b. NAVSUPPFAC Diego Garcia

Diego Garcia is a remote site, located in the middle of the Indian Ocean, and personnel do not have many alternative dining choices. Furthermore, all military personnel have been able to utilize the government dining facility. Although the surcharge may have deterred some personnel from utilizing the galley on a regular basis, the lack of choices encouraged occasional patronage. Coupled with the fact that the other dining alternatives had very reasonable prices, AIRPAC's Smart TAD program did not have a significant impact on club revenues. On an isolated site, personnel had the disposable food income to eat where they desired without significant financial strain.

While the Officer's Club posted a loss for FY93 and FY95, this is due primarily to depreciation on the new building. As with NAS Fallon, the MWR Department

has increased customer enjoyment by introducing slot machines to the club system. While this only increases profits by \$40,000 each year, the presence of additional patrons increased their overall revenue. Because transient personnel make up a significant portion of the island's military population, the decrease in disposable income seems to have affected the revenue at the Peacekeeper Inn and Officer's Club. A liberal subsidy of \$30,000 would help maintain the quality of service at these establishments and make up for lost profits to the MWR.

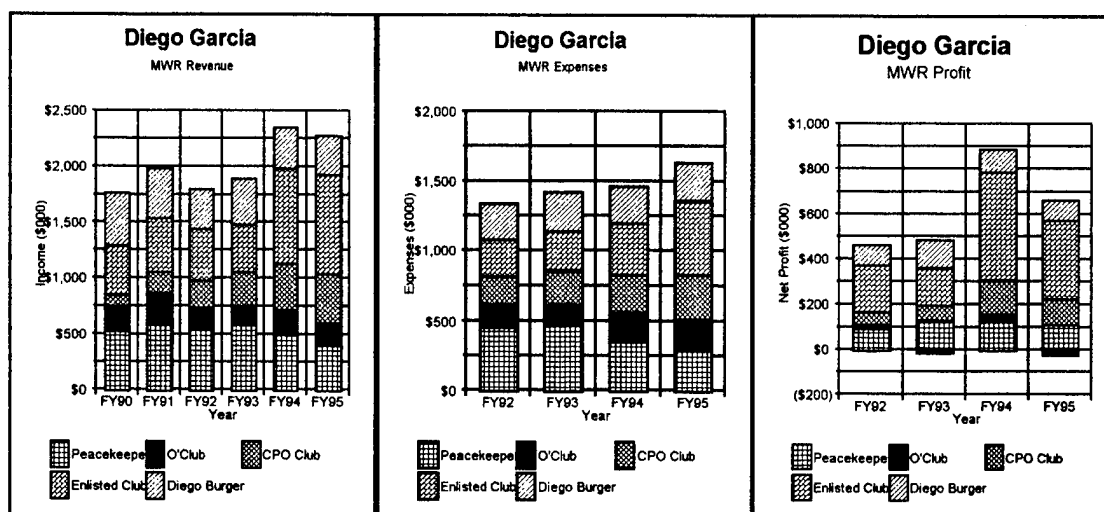


Figure 11. Diego Garcia MWR Operations

c. Misawa AFB

The main revenue generators for the Services Squadron (Air Force's MWR) are the clubs, bowling alley, golf course, and concessionaires. Again, the enlisted clubs do not seem to be adversely affected by a reduction in per diem payments. For the Officer's Club, the small number of transient naval officers might have a minor impact. The food services at the bowling alley would also be affected. While the bowlers would continue to

utilize the eating facilities, the number of transient personnel just eating there would be reduced. Coupled with their low operating margin, a small subsistence might be necessary to ensure that their services are not reduced. The major losers would be the concessionaires. While the navy is under no obligation to ensure the survivability of concessionaires, the decreased funds provided to the Support Squadron is of some concern.

The Services Squadron uses the profits from the revenue generating activities to support the fitness center, child care facility, youth activities. Transient personnel only utilize the fitness center and any subsidy of the Support Squadron should be limited to those activities which are utilized by transient personnel. In Misawa's case, a \$20,000 total subsidy is recommended because the future profits derived from transient personnel might not be sufficient to cover the services provided to the transient personnel.

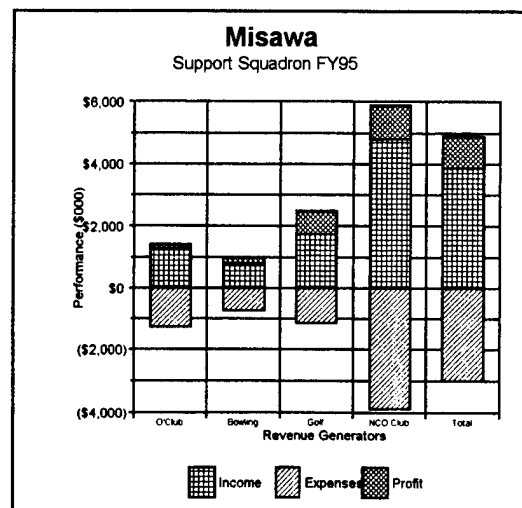


Figure 12. Misawa AFB Support Squadron Operations

2. Base Operating Expenses

In a few instances, an installation will incur additional operating expenses in order to support the availability of the government dining facility for transient personnel. These expenses should be reimbursed by the Type Commander. Of the three installations evaluated, NAVSUPFAC Diego Garcia incurred additional expenses when they provided the "VP Express" to transport squadron personnel between the hangar and dining facility every 15 minutes during meal hours. The estimated annual expense for this service is \$3,000 for fuel and \$10,000 for labor and general administrative expenses.

3. Military Construction Requirements

Most military dining facilities are not designed for both officers and enlisted personnel. At a time when fraternization is being strictly discouraged, it is not appropriate to have officers, senior enlisted, and junior enlisted personnel eating together. The NAS Fallon Galley is slated for a MILCON Project which would provide suitable eating areas, along with other improvements, for a one-time cost of \$1.2 million. Other dining facilities may also require similar modifications.

4. Other Expenses

When the government provides a service, there are additional costs which are not readily apparent. The processing of travel claims is a significant cost and is being addressed by the DoD Task Force to Reengineer Travel. While the cost associated with reimbursing some personnel 50% of the daily per diem rate for missing 1-2 meals is less than processing travel claims for all personnel in the transient unit, it is significantly more

than directing all personnel to eat in government messing facilities with no additional reimbursement.

A logistical cost of transporting additional food and supplies to the government messing facilities would increase the cost for each meal. This cost is not currently recognized as a cost of operating a dining facility. While the increased transportation costs for NAS Fallon would be minimal, the increased transportation costs for NAVSUPFAC Diego Garcia could be significant. To the extent that personnel eat at either the galley or MWR activities, which both utilize defense supply channels, the transportation costs will remain fairly constant. If the personnel alter their eating preferences from concessionaires to the galley, the Defense Supply Center will experience additional transportation costs. In the private sector, these costs are reflected in the item price.

D. NET SAVINGS

The Type Commander must determine whether directing their personnel to utilize government messing will achieve the cost savings anticipated. The annual net savings range from \$1.7 million for NAVSUPFAC Diego Garcia to \$3.2 million for NAS Fallon. Although the Type Commander will achieve the greatest cost savings at NAS Fallon, they will also need to complete a \$1.2 million construction project before the galley will be able to adequately accommodate officers with the senior and junior enlisted personnel. For Misawa AFB, the Type Commander will need to consider whether the costs of completing a construction project at an Air Force installation in a foreign country is worth the projected \$1.7 million annual savings. Actual values can be found in Appendix G.

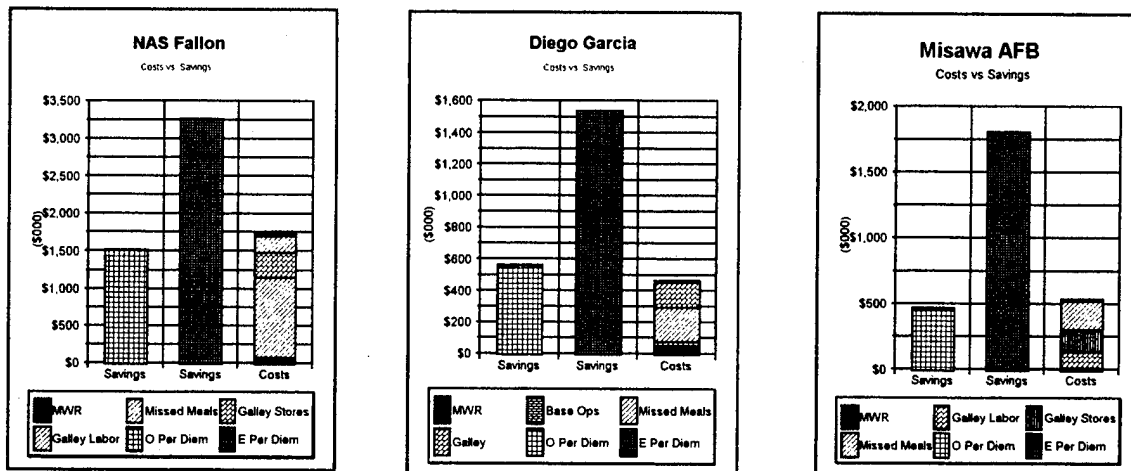


Figure 13. Costs / Savings Comparison for Each Base

To complete this analysis, it must be understood where these savings are coming from. While the government dining facilities are being better utilized, the galley efficiency cannot account for the complete savings figures. Personnel at their PCS installation decide to eat at different establishments at their own cost. When personnel are not on a travel status, they are not reimbursed for these expenses, aside from their subsistence. Travelers, just like at home, will eat some of their meals in their quarters, the coffee mess, fast food outlets, the club system, and sometimes decide to eat a snack instead of a meal. Even if everyone chose to eat in the galley for free instead of the O'Club, there would be substantial savings.

When personnel are on an extended detachment or deployment, they do not spend their full per diem payment. Per diem is based on eating in an average restaurant. When travelers do not eat all of their meals at an average restaurant, they save the difference. This personal savings is the portion of the per diem that will be eliminated and accounts for a significant portion of the net savings.

V. CONCLUSIONS

Naval personnel enter the Navy expecting to travel. They know that they will be away from their homes for extended periods of time, but expect the Navy to provide food and lodging while on these detachments and deployments. Furthermore, they expect their families to be safe and cared for. If the Navy provides support services for families and adequately reimburses travelers for their reasonable expenses, the travelers are able to carry out their assigned duties without distractions.

A. THE CURRENT TRAVEL FUNDING PROCESS

Travel funds are appropriated by Congress through the O&M account. The budget is further allocated through the services to the Type Commanders. With the budgeted funds, the Type Commander is responsible to ensure that their personnel are adequately trained and that the assigned missions are accomplished. As funds are decreased and mission requirements remain the same, Type Commanders must make difficult budgetary decisions.

Per diem is a significant portion of the travel budget. Generally, Type Commanders do not have control over what per diem rate is to be paid to the personnel. However, there have been a few innovative programs developed to enable the military to fulfill their "contract" with the service members while having enough funding to accomplish the mission.

1. AIRPAC's Smart TAD Program

AIRPAC recognized that galleys were underutilized and received a waiver of the surcharge for naval personnel at 5 AIRPAC bases. This resulted in the reduction of the food

portion of per diem to the food portion of the galley costs (no surcharge). For FY94, it was estimated that AIRPAC saved over \$8 million through the Smart TAD program.

Although the savings are impressive for AIRPAC's efforts, the implementation of their program needs some revisions. While they do recognize the additional costs to the galley as being appropriate costs of the program, they do not recognize the adverse effects on the MWR activities. Some government messing facilities also need additional construction to adequately enable officers, chiefs, and junior enlisted personnel to utilize the same facilities. Furthermore, in AIRPAC's effort to reduce travel costs, the message has been received by the Squadron Commanders that there is no way to reimburse their personnel should they be unable to utilize government messing facilities. These issues must be addressed for this program to be successful.

a. MWR Activities

MWR activities at NAS Fallon have suffered due to AIRPAC's Smart TAD program. While the Sports Line Bar & Grill has been profitable, the Silver State Club has taken a big blow. Furthermore, it can be argued that all of the clubs would have been more profitable had the transient personnel received more disposable income. MWR activities directly enhance the quality of life for permanently stationed and transient personnel alike.

The effects on the whole base must be considered. While I do not suggest that the clubs be wholly subsidized by AIRPAC, the clubs should be compensated for maintaining a level of expected service which is unprofitable, but is critical for the maintenance of the personnel quality of life. For example, the personnel costs of the Silver State Club should be subsidized by AIRPAC so that the club could be open for all meals during the week.

Furthermore, it should be recognized that some of the profits generated by the clubs are used to fund other activities which are important but not as self-sustaining.

b. Missed Meals

AIRPAC's position is that requests for missed meals can be submitted by personnel who are unable to eat in government facilities due to operational requirements. However, the approval authority rests with AIRPAC due to some perceived abuses by the Squadron Commanders. Furthermore, most of the few requests are rejected by AIRPAC. While not explicit, the message received by the Squadron Commanders is that missed meal requests are not encouraged. Personnel have been missing meals at their own expense, leading to significant dissatisfaction on the part of the travelers.

By recognizing the cost of missed meals, AIRPAC will be able to focus resources on why personnel are missing meals and how to reduce the overall missed meal expenditure. There are costs associated with the missed meals, whether it is in the form of payments to the travelers or payments to the galley for increased services, there is a tradeoff. While it may not be cost-effective to open the galley for ten personnel who eat their mid-shift meal at 0100, it might be worthwhile to adjust the galley or working hours of 75 personnel who do not have time to eat in the galley and arrive at work on time.

B. THE FUTURE TRAVEL PROCESS

As a whole, the travel process has drawn criticism. Aside from the costs to conduct actual travel, criticism has been made of the complex regulations and the high administrative

costs. Both users and observers agree that the program is too complex and costs too much [Ref. 4]. Any change in the process must address these concerns.

The DoD Task Force to Reengineer Travel has released its recommendations for a better program. Its major thrust is to empower the Type Commander to make the appropriate travel decisions and to simplify the accounting process. Another significant recommendation for the creation of a 'deployment travel' category would allow deployed personnel to receive services in kind. Any proposal affecting the travel process should support the objectives of this team.

C. ADAPTATIONS FOR REGULAR UNIT DEPLOYMENTS

This thesis addressed the unique situation of aviation squadrons in the Navy. They are routinely deployed to overseas U.S. bases and have an operational schedule which is not always supported by the government messing facilities. While personnel should utilize government messing to the fullest extent possible, there must be a process in place which would support the deployed unit and its personnel.

Each base is unique. If a base is deemed suitable for a Rations In Kind program, then further investigation should be made to ensure that the quality of life for the travels will not suffer when the per diem system is changed. This includes measuring the effects of the transient personnel on MWR activities and what additional costs would be borne by the galley and installation.

D. RECOMMENDATIONS

AIRPAC's Smart TAD program and the recommendations of the DoD Task Force to Reengineer Travel are compatible and should be expanded. While there are minor differences, a more thorough study of the effects of reducing the per diem levels could be conducted at some bases while the services in kind concept is implemented at other installations immediately. The following actions should be undertaken as a prelude for changing the per diem level at a few select bases which currently have the resources to adequately support transient personnel.

1. Eliminate the food portion of per diem and allow personnel to eat in the galley for free. A sticker affixed to the ID card would suffice for identification.
2. Require the Type Commander to reimburse the galley directly for the meals eaten by their personnel (this is similar to a new program where the Type Commander reimburses the BOQ and BEQ directly for the number of rooms used by their personnel).
3. Reimburse travelers for missed meals at the DoD Task Force to Reengineer Travel rate of 50% for one or two missed meals each day and 100% of the local per diem rate for three missed meals.
4. Approve missed meal requests at the Squadron Commander level with just enough documentation to identify common reasons for missing meals. If the requests must be audited, let this audit be limited to a sample of the requests. At the end of each month, the Administration Department would submit a squadron list to the Personnel Support Detachment with any travel claims for checks to be cut for the personnel.
5. Provide travelers with a check each month for incidentals. If they missed meals during the previous month, their check amount would be higher.
6. Negotiate an agreement covering all services, similar to an Inter-service Support Agreement, which would be the basis for reimbursement by the Type Commander to the galley and MWR Department for increased costs or lost revenue.

E. FUTURE THESIS TOPICS

Areas for further study emerged as the thesis process progressed. Initially, the reporting requirements for galley contractors are not specific enough to conduct an analysis of their current operations. In some cases, financial analysts do not even trust the information provided by the contractor and rely solely on what was paid under the fixed price contract. The benefits of better information should be compared to the additional reporting costs.

The next area of interest concerns the elimination of per diem and what the effect would be on concessionaires and MWR activities. There was an effect when AIRPAC reduced per diem to the galley food rate, but no study has been completed on how that actually impacted the concessionaires and MWR activities. The effects of a complete elimination of per diem is needs further study.

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APPENDIX A. POM FUNDING FOR PER DIEM

(\$000)	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97	Totals
	Actuals	Actuals	Actuals	Curr Est	Budgeted	Budgeted	
O&M,N							
Per Diem	207,022	175,849	196,285	172,047	163,758	155,669	1,070,628
Other Travel Costs	107,042	92,073	98,551	94,135	95,246	93,603	580,650
AMC Passage	19,403	20,036	14,271	14,564	14,459	14,541	97,274
Leased Vehicles	10	4	35	3	3	3	58
Leased Vehicles	17,863	16,597	22,795	20,656	20,698	21,346	119,955
Total O&M,N	351,340	304,559	331,937	301,405	294,162	285,162	1,868,585
 PACFLT O&M,N							
Per Diem	47,128	36,170	42,390	41,167	37,708	36,184	240,747
Other Travel Costs	24,990	16,780	22,931	21,219	20,295	19,609	125,824
AMC Passage	10,347	8,093	6,656	6,984	6,719	6,567	45,366
Leased Vehicles	1,399	955	3,999	2,257	2,128	2,140	12,878
Total PACFLT	83,864	61,998	75,976	71,627	66,850	64,500	424,815

APPENDIX B. PDFF MODEL

NAS Fallon, NV
Officers

\$Per Diem	Per Diem Rate	\$Per Diem
N	Number of Transient Personnel	N
G	Galley Percentage	G
MPE	Marginal Propensity to Eat in the Galley	MPE
M	Missed Meal Percentage	M
C	Commercial Sources	C
BMR	Basic Meal Rate	BMR
Surcharge	Surcharge Rate	Surcharge
\$Ration	Cost Per Ration	\$Ration

24	24
63120	63120
0.5	0.5
0.1 A1	0.1 A1
0.75 A2	0.75 A2
1-G	1-G
4.65	4.65
13.95	13.95
4.65 A3	4.65 A3

Program	Per Diem	G-Use %	Ng Rations	# Nm	Nc Rations	Total Per Diem Reimb	Missed Meal Reimb	Recon. Payment to Galley	Total Airpac Payment	Total Traveler Reimb	Direct Galley Revenue
1. Lodgings Plus	24	0.1	3,945	47,340	35,505	1,514,880	0	0	1,514,880	1,514,880	73,377
2. Smart TAD	5	0.5	19,725	47,340	19,725	293,508	458,015	0	751,523	751,523	91,721
3. Rations In Kind	0	0.6	23,670	47,340	15,780	0	568,080	110,066	678,146	568,080	0

1. An increased A1 increases Program 3 Costs
 2. An increased A2 increases Program 3 Costs
 3. An increased A3 increases Program 3 Costs, provided MPE>0.

Galley Labor Requirements: >60,000 Rations
 (Included in the Enlisted Model for simplicity)

+ \$216,000

NAS Fallon O

Assumptions	Lodgings Plus	Smart TAD	Compared to Lodgings Plus		Compared to Smart TAD
			Savings Smart TAD	Savings RIK	
M = 0.20	1,514,880	\$415,645	\$1,099,235	\$1,204,898	\$105,663
M = 0.50	1,514,880	\$598,851	\$916,029	\$1,004,081	\$88,052
M = 0.75	1,514,880	\$751,523	\$763,358	\$836,735	\$73,377
M = 1.0	1,514,880	\$904,194	\$610,686	\$669,388	\$58,702
M = 0.75					
G = 0.4	1,514,880	\$751,523	\$763,358	\$855,079	\$91,721
G = 0.5	1,514,880	\$751,523	\$763,358	\$836,735	\$73,377
G = 0.6	1,514,880	\$751,523	\$763,358	\$818,390	\$55,033
M = 0.75					
G = 0.5					
\$Ratio = 5	1,514,880	\$758,426	\$756,454	\$828,450	\$71,996
\$Ratio = 8	1,514,880	\$817,601	\$697,279	\$757,440	\$60,161
\$Ratio = 11	1,514,880	\$876,776	\$638,104	\$686,430	\$48,326
M = 1.0					
G = 0.6	1,514,880	\$1,024,438	\$490,442	\$514,428	\$23,986
\$Ratio = 11					

NAS Fallon, NV
Enlisted

\$Per Diem	Per Diem Rate	\$Per Diem	18.5
N	Number of Transient Personnel	N	176256
G	Galley Percentage	G	0.5
MPE	Marginal Propensity to Eat in the Galley	MPE	0.1 A1
M	Missed Meal Percentage	M	0.2 A2
C	Commercial Sources	C	1-G
BMR	Basic Meal Rate	BMR	4.65
Surcharge	Surcharge Rate	Surcharge	13.95
\$Ration	Cost Per Ration	\$Ration	4.65 A3

Program	Per Diem	G-Use %	Ng	Nm	Nc	Total Per Diem Reimb	Missed Meal Reimb	Recon. Payment to Galley	Total Airpac Payment	Total Traveler Reimb	Direct Galley Revenue
1. Lodgings Plus	19	0.1	15,863	35251	142,767	3260736	0	0	3260736	3260736	295053
2. Smart TAD	5	0.5	79,315	35251	79,315	819590	244115	216000	1279705	1063705	368816
3. Rations In Kind	0	0.6	95,178	35251	63,452	0	326074	658579	984652	326074	0

1. An increased A1 increases Program 3 Costs
2. An increased A2 increases Program 3 Costs
3. An increased A3 increases Program 3 Costs, provided MPE>0.

Galley Labor Requirement >60,000 Rations + \$216,000
(Included in the Enlisted Model for simplicity)

NAS Fallon E		2061048 1953884		Compared to Lodgings Plus		Compared to Smart TAD	
Assumptions	Lodgings Plus	Smart TAD	RIK	Savings Smart TAD	Savings RIK	Savings Smart TAD	Savings RIK
M = 0.10	\$3,260,736	\$1,157,648	\$846,203	\$2,103,088	\$2,414,533	\$2,103,088	\$311,444
M = 0.20	\$3,260,736	\$1,279,705	\$984,652	\$1,981,031	\$2,276,084	\$1,981,031	\$295,053
M = 0.30	\$3,260,736	\$1,401,762	\$1,123,102	\$1,858,974	\$2,137,634	\$1,858,974	\$278,661
M = 0.40	\$3,260,736	\$1,523,820	\$1,261,551	\$1,736,916	\$1,999,185	\$1,736,916	\$262,269
M = 0.20							
G = 0.4	\$3,260,736	\$1,279,705	\$910,889	\$1,981,031	\$2,349,847	\$1,981,031	\$368,816
G = 0.5	\$3,260,736	\$1,279,705	\$984,652	\$1,981,031	\$2,276,084	\$1,981,031	\$295,053
G = 0.6	\$3,260,736	\$1,279,705	\$1,058,416	\$1,981,031	\$2,202,320	\$1,981,031	\$221,289
M = 0.20							
G = 0.5							
\$Ration = 5	\$3,260,736	\$1,307,465	\$1,017,965	\$1,953,271	\$2,242,771	\$1,953,271	\$289,500
\$Ration = 8	\$3,260,736	\$1,545,411	\$1,303,500	\$1,715,325	\$1,957,236	\$1,715,325	\$241,911
\$Ration = 11	\$3,260,736	\$1,783,356	\$1,589,034	\$1,477,380	\$1,671,702	\$1,477,380	\$194,322
M = 0.4							
G = 0.6	\$3,260,736	\$2,061,048	\$1,953,884	\$1,199,688	\$1,306,852	\$1,199,688	\$107,164
\$Ration = 11							

NAVSUPPFAC Diego Garcia

\$Per Diem	Per Diem Rate	
N	Number of Transient Personnel	19
G	Galley Percentage	110328
MPE	Marginal Propensity to Eat in the Galley	0.5
M	Missed Meal Percentage	0.1 A1
C	Commercial Sources	0.2 A2
BMR	Basic Meal Rate	1-G
Surcharge	Surcharge Rate	4.65
\$Ration	Cost Per Ration	13.95
		4.65 A3

Program	Per Diem	G-Use %	Ng	Nm	Nc	Total Per Diem Reimb	Missed Meal Reimb	Recon. Payment to Galley	Total Airpac Payment	Total Traveler Reimb	Direct Galley Revenue
1. Lodgings Plus	19	0.1	9,930	22066	89,366	2096232	0	0	2096232	2096232	184689
2. Smart TAD	5	0.5	49,648	22066	49,648	513025	158321	0	671346	671346	230861
3. Rations in Kind	0	0.6	59,577	22066	39,718	0	209623	277034	486657	209623	0

1. An increased A1 increases Program 3 Costs
2. An increased A2 increases Program 3 Costs
3. An increased A3 increases Program 3 Costs, provided MPE>0.

NAVSUPPFAC Diego Garcia

Assumptions	Lodgings Plus	Smart TAD	Compared to Lodgings Plus		Compared to Smart TAD
			Savings Smart TAD	Savings RIK	
M = 0.10	\$2,096,232	\$592,186	\$1,504,046	\$1,698,996	\$194,950
M = 0.20	\$2,096,232	\$671,346	\$1,424,886	\$1,609,575	\$184,689
M = 0.30	\$2,096,232	\$750,506	\$1,345,726	\$1,520,154	\$174,429
M = 0.40	\$2,096,232	\$829,667	\$1,266,565	\$1,430,734	\$164,168
M = 0.20					
G = 0.4	\$2,096,232	\$671,346	\$1,424,886	\$1,655,747	\$230,861
G = 0.5	\$2,096,232	\$671,346	\$1,424,886	\$1,609,575	\$184,689
G = 0.6	\$2,096,232	\$671,346	\$1,424,886	\$1,563,403	\$138,517
M = 0.20					
G = 0.5					
\$Ration = 4	\$2,096,232	\$639,075	\$1,457,157	\$1,648,300	\$191,143
\$Ration = 6	\$2,096,232	\$738,370	\$1,357,862	\$1,529,146	\$171,284
\$Ration = 8	\$2,096,232	\$837,665	\$1,258,567	\$1,409,992	\$151,425
M = 0.4					
G = 0.6	\$2,096,232	\$1,007,074	\$1,089,158	\$1,182,716	\$93,558
\$Ration = 8					

Misawa AFB, Japan

Program	Per Diem	Per Diem Rate	\$Per Diem	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	12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Misawa AFB

Assumptions	Lodgings Plus	Smart TAD	Compared to Lodgings Plus		Compared to Smart TAD
			Savings Smart TAD	Savings RIK	
M = 0.10	\$2,352,960	\$811,201	\$1,541,759	\$1,760,584	\$218,825
M = 0.20	\$2,352,960	\$900,056	\$1,452,904	\$1,660,212	\$207,308
M = 0.30	\$2,352,960	\$959,614	\$1,393,346	\$1,559,839	\$166,493
M = 0.40	\$2,352,960	\$1,048,469	\$1,304,491	\$1,459,467	\$154,976
M = 0.20					
G = 0.4	\$2,352,960	\$870,758	\$1,482,202	\$1,712,039	\$229,837
G = 0.5	\$2,352,960	\$900,056	\$1,452,904	\$1,660,212	\$207,308
G = 0.6	\$2,352,960	\$900,056	\$1,452,904	\$1,608,385	\$155,481
M = 0.20					
G = 0.5					
\$Ratio = 3	\$2,352,960	\$808,105	\$1,544,855	\$1,770,553	\$225,698
\$Ratio = 5	\$2,352,960	\$919,561	\$1,433,399	\$1,636,806	\$203,407
\$Ratio = 7	\$2,352,960	\$1,031,017	\$1,321,943	\$1,503,059	\$181,116
M = 0.4					
G = 0.6	\$2,352,960	\$1,217,458	\$1,135,502	\$1,250,425	\$114,924
\$Ratio = 7					

APPENDIX C. PER DIEM FORECASTS

NAVSUPPFAC Diego Garcia

	Detachment Personnel	Per Diem Rate	Monthly Per Diem	Annual Per Diem
BOQ Month	2,462	\$19.00	\$46,778	\$561,336
BEQ Month	6,732	\$19.00	\$127,908	\$1,534,896
	9,194		\$174,686	\$2,096,232

NAS Fallon, NV

	Detachment Personnel	Per Diem Rate	Monthly Per Diem	Annual Per Diem
BOQ Month	5,260	\$24.00	\$126,240	\$1,514,880
BEQ Month	14,688	\$18.50	\$271,728	\$3,260,736
	19,948		\$397,968	\$4,775,616

Misawa AFB, Japan

	Detachment Personnel	Per Diem Rate	Monthly Per Diem	Annual Per Diem
BOQ Month	2,130	\$19.00	\$40,470	\$485,640
BEQ Month	8,190	\$19.00	\$155,610	\$1,867,320
	10,320		\$196,080	\$2,352,960

NOTE: Detachment personnel are estimated at 85 - 90% of the BEQ/BOQ t

APPENDIX D. GALLEY OPERATIONS

NAVSUPPFAC Diego Garcia

	Military Compensation	CCE	Supplies & Material	BOS Contract	Stores Consumed	Utilities	Depr & Upkeep	Total Expenses
FY92	201,218	0	93,153	799,347	1,131,980	0	0	2,225,698
FY93	181,743	0	2,000	687,500	1,161,487	6,136	50,000	2,088,866
FY94	151,445	0	2,000	1,224,359	1,111,532	6,504	50,000	2,545,840

	BMR Collected	Surcharge Collected	Total Revenue	Net Cost	Rations Fed	Cost/ Ration
FY92	271,936	30,127	302,063	1,923,635	232,893	8.260
FY93	288,896	27,279	316,175	1,772,691	239,664	7.397
FY94	310,334	20,094	330,428	2,215,412	219,681	10.085

	Contract	Rations Fed	Cost/ Ration	Stores Consumed	Rations Fed	Cost/ Ration
FY92	2,024,480	232,893	8.693	1,131,980	232,893	4.861
FY93	1,850,987	239,664	7.723	1,161,487	239,664	4.846
FY94	2,337,891	219,681	10.642	1,111,532	219,681	5.060

	Rations Fed	Military Compensation	Supplies & Material	BOS Contract	Stores Consumed
FY92	232,893	201,218	93,153	799,347	1,131,980
FY93	239,664	181,743	2,000	687,500	1,161,487
FY94	219,681	151,445	2,000	1,224,359	1,111,532

Correlation Analysis

	Rations	Military Compensation	Supplies	FSA	Stores
Rations	1				
Military Compensation	-0.515	1			
Supplies	0.828	-0.131	1		
FSA Contract	-0.701	-0.169	-0.637	1	
Stores Consumed	0.998	-0.569	0.814	-0.652	1

NAS Fallon, NV

		<i>Provided by the contractor (fixed price contract)</i>						
Galley Operations	Military	CCE	Supplies	(AIRPAC)	(AIRPAC)	Utilities	Depr &	Total
	Compensation			& Material	BOS			
FY92	0	0	0	1,024,622	186,867	31,767	7,654	1,250,910
FY93	0	48,811	0	1,033,497	490,466	38,357	9,810	1,620,941
FY94	0	37,981	0	1,109,853	551,076	43,106	36,324	1,778,340

	BMR Collected	Surcharge Collected	Total Revenue	Net Cost	Rations Fed	Cost/ Ration
FY92	75,677	40,051	115,728	1,135,182	43,057	26.365
FY93	262,090	8,123	270,213	1,350,728	91,676	14.734
FY94	334,814	2,674	337,488	1,440,852	103,005	13.988

	Fixed Contract	Rations Fed	Cost/ Ration	Stores Consumed	Rations Fed	Cost/ Ration
FY92	416,698	43,057	9.678	186,867	43,057	4.340
FY93	746,441	91,676	8.142	490,466	91,676	5.350
FY94	809,619	103,005	7.860	551,076	103,005	5.350

	Rations Fed	(Comptroller) BOS Contract	(AIRPAC) BOS Labor	Combined (Labor + Stores)	(AIRPAC) Stores Consumed	Utilities	Depr & Upkeep
FY92	43,057	416,698	1,024,622	1,211,489	186,867	31,767	7,654
FY93	91,676	746,441	1,033,497	1,523,963	490,466	38,357	9,810
FY94	103,005	809,619	1,109,853	1,660,929	551,076	43,106	36,324

Correlation Analysis

	Rations	Comptroller	Labor	Combined	Stores	Utilities	Depr
Rations	1.000						
Comptroller	0.997	1.000					
Labor (AIRPAC)	-0.572	-0.511	1.000				
Combined	0.205	0.276	0.685	1.000			
Stores Consumed	0.989	0.997	-0.448	0.344	1.000		
Utilities	0.892	0.853	-0.859	-0.238	0.815	1.000	
Depr & Upkeep	0.741	0.733	-0.248	0.341	0.739	0.668	1.000

Galley Operating Costs (Fixed Price Contract)

FY	Rations	Fixed Price	IQ Cost	Total Cost	Cost/Ration (BOS)
1992	40,970	396,144	20,554	416,698	10.171
1993	91,798	396,144	350,297	746,441	8.131
1994	103,005	396,144	413,475	809,619	7.860
1995	94,486	396,144	347,671	743,815	7.872

Misawa AFB, Japan

Galley Operations

Stores Consumed	\$700,000	
Current Rations	200,000	\$3.50 / ration

		Expected		Annual
		(101 - 150)	(151 - 200)	Change
Change (rations / day)	(50 - 100)			
Labor Requirements	+ 3 E-4s	+ 4 E-4s	+ 5 E-4s	
Military Compensation	\$87,894	\$117,192	\$146,490	\$146,490
Stores Consumed			\$195,048	\$195,048
Utilities	Minimal	Minimal	Minimal	Minimal
				\$341,538

APPENDIX E. MISSED MEAL ESTIMATES

NAVSUPPFAC Diego Garcia

	Detachment Personnel	20% Missed	Monthly 50% Per Diem	Annual
BOQ Month	2,462	492	\$4,678	\$56,134
BEQ Month	6,732	1,346	\$12,791	\$153,490
	9,194	1,839	\$17,469	\$209,623

NAS Fallon, Nevada

	Detachment Personnel	O = 75% E = 20% Missed	Monthly 50% Per Diem	Annual
BOQ Month	5,260	3,945	\$47,340	\$568,080
BEQ Month	14,688	2,938	\$27,173	\$326,074
	19,948	6,883	\$74,513	\$894,154

Misawa AFB, Japan

	Detachment Personnel	20% Missed	Monthly 50% Per Diem	Annual
BOQ Month	2,130	426	\$4,047	\$48,564
BEQ Month	8,190	1,638	\$15,561	\$186,732
	10,320	2,064	\$19,608	\$235,296

NOTE: Detachment personnel are estimated at 85 - 90% of the BEQ/

APPENDIX F. MWR OPERATIONS

NAVSUPPFAC Diego Garcia

	FY90	FY91	FY92	FY93	FY94	FY95
Peacekeeper Inn						
Revenue	535302	601346	558,302	602,494	494,300	409,666
- Expenses			457,422	467,281	361,628	290,908
Profit (Loss)			100,880	135,213	132,672	118,758

	FY90	FY91	FY92	FY93	FY94	FY95
O'Club						
Revenue	229083	266640	186,503	152,936	223,591	208,406
- Expenses			171,570	163,123	195,967	227,095
Profit (Loss)			14,933	(10,187)	27,624	(18,689)

	FY90	FY91	FY92	FY93	FY94	FY95
CPO Club						
Revenue	89668	192812	244,539	301,940	415,974	422,788
- Expenses			185,625	235,549	270,432	312,083
Profit (Loss)			58,914	66,391	145,542	110,705

	FY90	FY91	FY92	FY93	FY94	FY95
Enlisted Club						
Revenue	451328	477467	464,817	435,056	849,306	895,592
- Expenses			269,670	271,816	372,891	545,588
Profit (Loss)			195,147	163,240	476,415	350,004

	FY90	FY91	FY92	FY93	FY94	FY95
Diego Burger						
Revenue	453205	440105	339,954	394,038	357,654	333,342
- Expenses			251,840	278,206	255,523	252,906
Profit (Loss)			88,114	115,832	102,131	80,436

NAS Fallon, NV

	FY92	FY93	FY94	FY95
Silver Star Club				
Revenue	322,202	194,160	137,412	102,311
- Expenses	321,038	222,648	164,938	132,990
Profit (Loss)	1,164	(28,488)	(27,526)	(30,679)

Sports Line Bar & Grill

Patronage by Meals	Breakfast	Lunch	Dinner	Bar
CY95	14,554	26,439	21,889	61,059
	95% civ	95% civ	90% mil	90% mil

Misawa AFB, Japan

	O'Club	NCO Club	Bowling	Golf	Total
Gross Income	709,046	3,786,199	718,263	1,235,751	6,449,259
Operating Expense	(1,167,841)	(2,970,885)	(691,138)	(1,100,320)	(5,930,184)
Other Income	598,383	1,075,981	124,574	549,566	2,348,504
Other Expense	(38,554)	(874,962)	(21)	3,643	(909,894)
	101,034	1,016,333	151,678	688,640	\$1,957,685

APPENDIX G. NET SAVINGS

NAVSUPPFAC Diego Garcia

Savings	Costs	
\$0	\$30,000	MWR
\$0	\$13,000	Base Operations
\$0	\$209,633	Missed Meals
\$0	\$0	Galley - Labor
\$0	\$148,009	Galley - Stores Consumed
\$561,541	\$0	Officer Per Diem
\$1,534,794	\$0	Enlisted Per Diem
<u>\$2,096,335</u>	<u>\$400,642</u>	
Net Savings		\$1,695,692

NAS Fallon, Nevada

Savings	Costs	
\$0	\$90,000	MWR
\$0	\$0	Base Operations
\$0	\$1,075,781	Missed Meals
\$0	\$216,000	Galley - Labor
\$0	\$205,230	Galley - Stores Consumed
\$1,514,806	\$0	Officer Per Diem
\$3,260,704	\$0	Enlisted Per Diem
<u>\$4,775,510</u>	<u>\$1,587,011</u>	
Net Savings		\$3,188,499

Misawa AFB, Japan

Savings	Costs	
\$0	\$20,000	MWR
\$0	\$0	Base Operations
\$0	\$227,246	Missed Meals
\$0	\$146,490	Galley - Labor
\$0	\$195,048	Galley - Stores Consumed
\$469,026	\$0	Officer Per Diem
\$1,803,438	\$0	Enlisted Per Diem
<u>\$2,272,464</u>	<u>\$588,784</u>	
Net Savings		\$1,683,680

NOTE: Galley labor includes all variable labor costs
Galley stores include all other variable costs

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